

conductivity type and second semiconductor regions of a second conductivity type, said first and second semiconductor regions being alternately arranged, the first contact layer contacting said first semiconductor regions and said second semiconductor regions to form a first interface, the second contact layer contacting with all the first and second semiconductor regions directly to form a second interface wherein said first and second interface are parallel to each other and wherein the first and second semiconductor regions are shaped in a manner that in a cross-section of the voltage sustaining layer parallel to the first and second

interface, the first and second semiconductor regions are square-shaped and form a mosaic pattern.

18. The semiconductor device of claim 17, wherein the first contact layer is an n^+ layer, the second contact layer is a p^+ layer, the first semiconductor regions are n regions and the second semiconductor regions are p regions.

19. The semiconductor device of claim 17, wherein the first contact layer is a p^+ layer, the second contact layer is an n^+ layer, the first semiconductor regions are p regions and the second semiconductor regions are n regions.

* * * * *

15

20

25

30

35

40

45

50

55

60

65